
5 Medieval Learning: Synthesis of Reason and Christian Faith

The twelfth century witnessed a revived interest in classical learning and the founding of universities. Traditional theology was broadened by the application of a new system of critical analysis, called scholasticism. Scholastic thinkers assumed that some teachings of Christianity, which they accepted as true by faith, could also be demonstrated to be true by reason. They sought to explain and clarify theological doctrines by subjecting them to logical analysis.

Adelard of Bath

A QUESTIONING SPIRIT

In the High and Late Middle Ages, ancient scientific texts, particularly the works of Aristotle, were translated from Greek and Arabic into Latin. Influenced by Aristotle's naturalistic and empirical approach, several medieval scholars devoted greater attention to investigating the natural world. An early exponent of this emerging scientific outlook was Adelard of Bath (c. 1080–c. 1145). Born in England, Adelard studied in France and traveled in Muslim lands, becoming an advocate of Arabic science.

Adelard's *Natural Questions* was written before the major Greek works were translated into Latin and made available to western European scholars. But it does show a growing curiosity and a questioning spirit, attitudes that are crucial to scientific thinking. *Natural Questions* is a dialogue between Adelard and his nephew; reproduced below are some of Adelard's responses to his nephew's queries.

ADELARD I take nothing away from God, for whatever exists is from Him and because of Him. But the natural order does not exist confusedly and without rational arrangement, and human reason should be listened to concerning those things it treats of. But when it completely fails, then the matter should be referred to God. Therefore, since we have not yet completely lost the use of our minds, let us return to reason. . . .

. . . It is difficult for me to talk with you about animals, for I have learned one thing, under the guidance of reason, from Arabic teachers; but you, captivated by a show of authority, are led around by a halter. For what should we call authority but a halter? Indeed, just as brute animals are led about by a halter wherever you please, and are not told where or why, but see the rope by which they are held and follow it alone, thus the authority of writers leads many of you, caught and bound by animal-like credulity, into danger. Whence some men, usurping the name of authority for themselves, have employed great license in writing, to such an extent that they do not hesitate to present the false as true to such animal-like men. For why not fill up sheets of paper, and why not write on the back too, when you usually have such readers today who require no rational explanation and

put their trust only in the ancient name of a title? For they do not understand that reason has been given to each person so that he might discern the true from the false, using reason as the chief judge. For if reason were not the universal judge, it would have been given to each of us in vain. It would be sufficient that it were given to one (or a few at most), and the rest would be content with their authority and decisions. Further, those very people who are called authorities only secured the trust of their successors because they followed reason; and whoever is ignorant of reason or ignores it is deservedly considered to be blind. I will cut short this discussion of the fact that in my judgment authority should be avoided. But I do assert this, that first we ought to seek the reason for anything, and then if we find an authority it may be added. Authority alone cannot make a philosopher believe anything, nor should it be adduced for this purpose. . . .

NEPHEW One should listen to what you say but not believe it. But I shall gird myself for higher things, so that, as far as my little knowledge permits, light might come forth from the smoke. For although I am ignorant of the Greeks' boasts, and I have not seen Vulcan's cave (i.e., Mt. Aetna), nevertheless I have learned

both to know what is true and to disprove what is false, and I have considerable skill in this. So continue! I want to find out what you think about human nature. For although you may consider what you have already said to be very important, nevertheless, if you do not know yourself, I think that your remarks have little value. For men ought most properly to investigate man. . . .

ADELARD I believe that man is dearer to the Creator than all the other animals. Nevertheless it does not happen that he is born with natural weapons or is suited for swift flight. But he has something which is much better and more worthy, reason I mean, by which he so far excels the brutes that by means of it he can tame them, put bits in their mouths, and train them to perform various tasks. You see, therefore, by how much the gift of reason excels bodily defenses. . . .

NEPHEW Since we have been discussing things having to do with the brain, explain, if you can, how the philosophers determined the physical location of imagination, reason and memory. For both Aristotle in the *Physics* (an erroneous reference) and other philosophers in other works, have been able to determine that the operations of imagination are carried on in the front part of the brain, reason in the middle,

and memory in the back, and so they have given these three areas the names imaginative, rational and memorial. But by what skill were they able to determine the site of each operation of the mind and to assign to each small area of the brain its proper function, since these operations cannot be perceived by any sense?

ADELARD To one who does not understand, everything seems impossible: but when things are understood, everything becomes clear. I would guess that whoever first undertook this task learned something about it from sense experience. Probably, someone who had formerly had a very active imagination suffered an injury to the front of his head and afterwards no longer possessed the imaginative faculty, although his reason and memory remained unaffected. And when this happened it was noticed by the philosopher. And similarly injuries to other parts of the head impeded other functions of the mind so that it could be established with certainty which areas of the brain controlled which mental functions, especially since in some men these areas are marked by very fine lines. Therefore, from evidence of this sort, which could be perceived by the senses, an insensible and intellectual operation of the mind has been made clear.

Saint Thomas Aquinas

SUMMA THEOLOGICA

For most of the Middle Ages, religious thought was dominated by the influence of Saint Augustine (d. 430), the greatest of the Latin church fathers (see page 186). Augustine placed little value on the study of nature; for him, the City of Man (the world) was a sinful place from which people tried to escape in order to enter the City of God (heaven). Regarding God as the source of knowing, he held that reason by itself was an inadequate guide to knowledge: without faith in revealed truth, there could be no understanding. An alternative approach to that of Augustine was provided by Thomas Aquinas (1225–1274), a friar of the Order of Preachers (Dominicans), who taught theology at Paris and later in Italy. Both Augustine and Aquinas believed that God was the source of all truth, that human nature was corrupted by the imprint of the original sin of Adam and Eve, and that God revealed himself through the Bible and in the person of Jesus Christ. But, in

contrast to Augustine, Aquinas expressed great confidence in the power of reason and favored applying it to investigate the natural world.

Aquinas held that as both faith and reason came from God, they were not in opposition to each other; properly understood, they supported each other. Because reason was no enemy of faith, it should not be feared. In addition to showing renewed respect for reason, Aquinas—influenced by Aristotelian empiricism (the acquisition of knowledge of nature through experience)—valued knowledge of the natural world. He saw the natural and supernatural worlds not as irreconcilable and hostile to each other, but as a continuous ascending hierarchy of divinely created orders of being moving progressively toward the Supreme Being. In constructing a synthesis of Christianity and Aristotelianism, Aquinas gave renewed importance to the natural world, human reason, and the creative human spirit. Nevertheless, by holding that reason was subordinate to faith, he remained a typically medieval thinker.

In the opening reading from his most ambitious work, the *Summa Theologica*, Thomas Aquinas asserts that reason by itself is insufficient to lead human beings to salvation.

Whether, Besides the Philosophical Sciences, Any Further Doctrine Is Required?

It was necessary for man's salvation that there should be a knowledge revealed by God, besides the philosophical sciences investigated by human reason. First, because man is directed to God as to an end that surpasses the grasp of his reason. . . . But the end must first be known by men who are to direct their thoughts and actions to the end. Hence it was necessary for the salvation of man that certain truths which exceed human reason should be made known to him by divine revelation. Even as regards those truths about God which human reason can investigate, it was necessary that man be taught by a divine revelation. For the truth about God, such as reason can know it, would only be known by a few, and that after a long time, and with the admixture of many errors; whereas man's whole salvation, which is in God, depends upon the knowledge of this truth. Therefore, in order that the salvation of men might be brought about more fitly and more surely, it was necessary that they be taught divine truths by divine revelation. It was therefore necessary that, besides the philosophical sciences investigated by reason, there should be a sacred science by way of revelation.

In the next selection, Aquinas uses the categories of Aristotelian philosophy to demonstrate through natural reason God's existence.

Whether God Exists?

The existence of God can be proved in five ways.

The first and more manifest way is the argument from motion. It is certain, and evident to our senses, that in the world some things are in motion. Now whatever is moved is moved by another, for nothing can be moved except it is in potentiality to that towards which it is moved; whereas a thing moves inasmuch as it is in act. For motion is nothing else than the reduction of something from potentiality to actuality. But nothing can be reduced from potentiality to actuality, except by something in a state of actuality. Thus that which is actually hot, as fire, makes wood, which is potentially hot, to be actually hot, and thereby moves and changes it. Now it is not possible that the same thing should be at once in actuality and potentiality in the same respect, but only in different respects. For what is actually hot cannot simultaneously be potentially hot; but it is simultaneously potentially cold. It is therefore impossible that in

the same respect and in the same way a thing should be both mover and moved, *i.e.*, that it should move itself. Therefore, whatever is moved must be moved by another. If that by which it is moved be itself moved, then this also must needs be moved by another, and that by another again. But this cannot go on to infinity, because then there would be no first mover, and, consequently, no other mover, seeing that subsequent movers move only inasmuch as they are moved by the first mover; as the staff moves only because it is moved by the hand. Therefore it is necessary to arrive at a first mover, moved by no other; and this everyone understands to be God.

The second way is from the nature of efficient cause. In the world of sensible things we find there is an order of efficient causes. There is no case known (neither is it, indeed, possible) in which a thing is found to be the efficient cause of itself; for so it would be prior to itself, which is impossible. Now in efficient causes it is not possible to go on to infinity, because in all efficient causes following in order, the first is the cause of the intermediate cause, and the intermediate is the cause of the ultimate cause, whether the intermediate cause be several, or one only. Now to take away the cause is to take away the effect. Therefore, if there be no first cause among efficient causes, there will be no ultimate, nor any intermediate, cause. But if in efficient causes it is possible to go on to infinity, there will be no first efficient cause, neither will there be an ultimate effect, nor any intermediate efficient causes; all of which is plainly false. Therefore it is necessary to admit a first efficient cause, to which everyone gives the name of God.

The third way is taken from possibility and necessity, and runs thus. We find in nature things that are possible to be and not to be, since they are found to be generated, and to be corrupted, and consequently, it is possible for them to be and not to be. But it is impossible for these always to exist, for that which can not-be at some time is not. Therefore, if everything can not-be, then at one time there was nothing in existence. Now if this were true, even now there would be

nothing in existence, because that which does not exist begins to exist only through something already existing. Therefore, if at one time nothing was in existence, it would have been impossible for anything to have begun to exist; and thus even now nothing would be in existence—which is absurd. Therefore, not all beings are merely possible, but there must exist something the existence of which is necessary. But every necessary thing either has its necessity caused by another, or not. Now it is impossible to go on to infinity in necessary things which have their necessity caused by another, as has been already proved in regard to efficient causes. Therefore we cannot but admit the existence of some being having of itself its own necessity, and not receiving it from another, but rather causing in others their necessity. This all men speak of as God.

The fourth way is taken from the graduation to be found in things. Among beings there are some more and some less good, true, noble, and the like. But *more* and *less* are predicated of different things according as they resemble in their different ways something which is the maximum, as a thing is said to be hotter according as it more nearly resembles that which is hottest; so that there is something which is truest, something best, something noblest, and, consequently, something which is most being, for those things that are greatest in truth are greatest in being. . . . Now the maximum in any genus is the cause of all in that genus, as fire, which is the maximum of heat, is the cause of all hot things. . . . Therefore there must also be something which is to all beings the cause of their being, goodness, and every other perfection; and this we call God.

The fifth way is taken from the governance of the world. We see that things which lack knowledge, such as natural bodies, act for an end, and this is evident from their acting always, or nearly always, in the same way, so as to obtain the best result. Hence it is plain that they achieve their end, not fortuitously, but designedly. Now whatever lacks knowledge cannot move towards an end, unless it be directed

by some being endowed with knowledge and intelligence; as the arrow is directed by the archer. Therefore some intelligent being exists

by whom all natural things are directed to their end; and this being we call God.

REVIEW QUESTIONS

1. What ideas of Adelard of Bath encouraged further scientific study of the natural world in the Middle Ages? What was his view of authority?
2. According to Thomas Aquinas, when does a person require more than reason to arrive at truth?
3. Show how Aquinas used both logic and an empirical method to prove the existence of God.

6 Medieval Universities

The twelfth century witnessed a revival of classical learning and cultural creativity. Gothic cathedrals, an enduring testament to the creativeness of the religious spirit, were erected throughout Europe. Roman authors were again read and their style imitated. Latin translations of Greek philosophical and scientific texts stimulated scholars; the reintroduction of the study of Roman law began to influence political theory and institutions. These were some of the major changes that would leave a permanent mark on subsequent Western culture.

A significant achievement of this age was the emergence of universities. Arising spontaneously among teachers of the liberal arts and students of the higher studies of law, theology, and medicine, the universities gave more formal and lasting institutional structure to the more advanced levels of schooling. The medieval universities were largely dedicated to educating young men for careers as lawyers, judges, teachers, diplomats, and administrators of both church and state. The educational foundation for such professional careers was the study of the liberal arts.

Geoffrey Chaucer AN OXFORD CLERIC

In his masterpiece, *The Canterbury Tales*, English poet and diplomat Geoffrey Chaucer (c. 1340–1400) describes a typical student on pilgrimage to the shrine of Saint Thomas à Becket in Canterbury.

An *Oxford Cleric*, still a student though,
One who had taken logic long ago,
Was there; his horse was thinner than a rake,
And he was not too fat, I undertake,

But had a hollow look, a sober stare.
The thread upon his overcoat was bare;
He had found no preferment [employment] in
the church